

CORRELATION BETWEEN STANDARDS FOR MATHEMATICAL PRACTICE (SMP) AND THE QUALITY CORE PROCESS STANDARDS PRECALCULUS

STANDARDS FOR MATHEMATICAL PRACTICE	QUALITY CORE PRECALCULUS PROCESS STANDARD
SMP#1: Make sense of problems and persevere in solving them.	B.1.a. Apply problem-solving skills (e.g., identifying irrelevant or missing information, making conjectures, extracting mathematical meaning, recognizing and performing multiple steps when needed, verifying results in the context of the problem) to the solution of real-world problems.
	B.1.b. Use a variety of strategies to set up and solve increasingly complex problems.
	B.1.c. Represent data, real-world situations, and solutions in increasingly complex contexts (e.g., expressions, formulas, tables, charts, graphs, relations, functions) and understand the relationships.
	B.1.f. Make mathematical connections among concepts, across disciplines, and in everyday experiences.
	B.1.g. Demonstrate the appropriate role of technology (e.g., calculators, software programs) in mathematics (e.g., organize data, develop concepts, explore relationships, decrease time spent on computations after a skill has been established).
	B.1.h. Apply previously learned mathematical concepts in more advanced contexts.
SMP#2: Reason abstractly and quantitatively.	B.1.a. Apply problem-solving skills (e.g., identifying irrelevant or missing information, making conjectures, extracting mathematical meaning, recognizing and performing multiple steps when needed, verifying results in the context of the problem) to the solution of real-world problems.
	B.1.b. Use a variety of strategies to set up and solve increasingly complex problems.
	B.1.c. Represent data, real-world situations, and solutions in increasingly complex contexts (e.g., expressions, formulas, tables, charts, graphs, relations, functions) and understand the relationships.
	B.1.e. Make appropriate use of estimation and mental mathematics in computations and to determine the reasonableness of solutions to increasingly complex problems.
	B.1.h. Apply previously learned mathematical concepts in more advanced contexts.

STANDARDS FOR MATHEMATICAL PRACTICE	QUALITY CORE PRECALCULUS PROCESS STANDARD
SMP#3: Construct viable arguments and critique the reasoning of others.	B.1.a. Apply problem-solving skills (e.g., identifying irrelevant or missing information, making conjectures, extracting mathematical meaning, recognizing and performing multiple steps when needed, verifying results in the context of the problem) to the solution of real-world problems.
	B.1.d. Use the language of mathematics to communicate increasingly complex ideas orally and in writing, using symbols and notations correctly.
SMP#4: Model with mathematics.	B.1.a. Apply problem-solving skills (e.g., identifying irrelevant or missing information, making conjectures, extracting mathematical meaning, recognizing and performing multiple steps when needed, verifying results in the context of the problem) to the solution of real-world problems.
	B.1.b. Use a variety of strategies to set up and solve increasingly complex problems.
	B.1.c. Represent data, real-world situations, and solutions in increasingly complex contexts (e.g., expressions, formulas, tables, charts, graphs, relations, functions) and understand the relationships.
	B.1.d. Use the language of mathematics to communicate increasingly complex ideas orally and in writing, using symbols and notations correctly.
	B.1.f. Make mathematical connections among concepts, across disciplines, and in everyday experiences.
	B.1.g. Demonstrate the appropriate role of technology (e.g., calculators, software programs) in mathematics (e.g., organize data, develop concepts, explore relationships, decrease time spent on computations after a skill has been established).
SMP#5: Use appropriate tools strategically.	B.1.a. Apply problem-solving skills (e.g., identifying irrelevant or missing information, making conjectures, extracting mathematical meaning, recognizing and performing multiple steps when needed, verifying results in the context of the problem) to the solution of real-world problems.
	B.1.c. Represent data, real-world situations, and solutions in increasingly complex contexts (e.g., expressions, formulas, tables, charts, graphs, relations, functions) and understand the relationships.
	B.1.e. Make appropriate use of estimation and mental mathematics in computations and to determine the reasonableness of solutions to increasingly complex problems.
	B.1.g. Demonstrate the appropriate role of technology (e.g., calculators, software programs) in mathematics (e.g., organize data, develop concepts, explore relationships, decrease time spent on computations after a skill has been established).
	B.1.h. Apply previously learned mathematical concepts in more advanced contexts.

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SMP#6: Attend to precision.	B.1.a. Apply problem-solving skills (e.g., identifying irrelevant or missing information, making conjectures, extracting mathematical meaning, recognizing and performing multiple steps when needed, verifying results in the context of the problem) to the solution of real-world problems.
	B.1.b. Use a variety of strategies to set up and solve increasingly complex problems.
	B.1.c. Represent data, real-world situations, and solutions in increasingly complex contexts (e.g., expressions, formulas, tables, charts, graphs, relations, functions) and understand the relationships.
	B.1.d. Use the language of mathematics to communicate increasingly complex ideas orally and in writing, using symbols and notations correctly.
	B.1.e. Make appropriate use of estimation and mental mathematics in computations and to determine the reasonableness of solutions to increasingly complex problems.
	B.1.h. Apply previously learned mathematical concepts in more advanced contexts.
SMP#7: Look for and make use of structure.	B.1.f. Make mathematical connections among concepts, across disciplines, and in everyday experiences.
	B.1.h. Apply previously learned mathematical concepts in more advanced contexts.
SMP#8: Look for and express regularity in repeated reasoning.	B.1.h. Apply previously learned mathematical concepts in more advanced contexts.